Claims

1. An apparatus for rectification of liquid mixtures and/or for scrubbing of gases, said apparatus comprising

an elongated processing chamber extending in a substantially horizontal direction,

means for supplying liquid into the processing chamber at a first end thereof,

means for discharging liquid from the processing chamber at an opposite second end thereof,

liquid application means including extending along at least a major part of the length of the chamber for repeatedly throwing supplied liquid transversely to the longitudinal axis of the processing chamber,

means for supplying gas into the processing chamber at said second end, and

means for discharging gas from the processing chamber at said first end so as to obtain a generally counter-current movement of liquid and gas through the processing chamber,

Characterised in that the processing chamber is divided into interconnected sections or stages by means of a plurality of guide plates each extending across a major part of the cross-section of the processing chamber.

2. An apparatus according to claim 1, wherein the processing chamber is defined by a peripheral wall and a pair of opposite end walls, at least one of the end walls comprising a releasable end wall part covering an opening, which is defined in the upper part of the end wall, said opening having dimensions sufficient to allow insertion of guide plates into the chamber through such opening.

3. An apparatus according to claim 2, wherein the releasable end wall part is in the form of a cover with a flange connected to the end wall by screws or bolts.

4. An apparatus according to any of the claims 1-3, wherein the inner peripheral wall of the processing chamber comprises means for releasable fastening said guide plates at any of axially spaced, predetermined positions.

5. An apparatus according to claim 4, wherein the releasable fastening means comprise annular flanges fastened to and extending radially inwardly from said inner peripheral chamber wall.

6. An apparatus according to any of the claims 1-5, wherein the liquid application means comprise a rotor defining liquid collecting pockets or chambers opening in the direction of rotation.

7. An apparatus according to claim 6, wherein the liquid application means further comprise an upwardly open liquid channel extending axially along the lower part of the processing chamber and having opposite ends, which are in communication with the liquid supplying means and the liquid discharging means, respectively, at least the lower part of the rotor being arranged within the liquid channel.

8. An apparatus according to claim 7, wherein the liquid application means comprise a liquid receiving chamber for receiving liquid flowing downwards along the inner peripheral wall of the processing chamber, the receiving chamber communicating with the liquid channel via an adjustable, longitudinally extending opening or slot.

9. An apparatus according to claim 8, wherein the liquid receiving chamber is defined between the peripheral inner wall of the processing chamber and a flap or plate member being pivotal about a longitudinal axis so as to allow adjustment of a space defined between the lower edge of the flap member and the adjacent part of the inner wall of the processing chamber.

10. An apparatus according to any of the claims 1-9, wherein consecutive guide plates are formed and arranged so as to force gas flowing from the gas supplying means to the gas discharge means to follow a tortuous path and to flow in opposite, transverse directions.

11. An apparatus according to any of the claims 1-10, wherein at least some of the guide plates define or comprise conduits for a heating or cooling fluid.

12. An apparatus according to any of the claims 1-11, further comprising conveyor means for removing solid matter separated in the processing chamber from the bottom part thereof.

13. An apparatus according to claim 12, wherein the conveyor means comprise a screw conveyor including a cylindrical housing communicating with the lower part of the processing chamber.

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